

~~CONFIDENTIAL~~ITEMS UNDER UNILATERAL U.S. DENIAL POLICY TO THE SOVIET BLOC

The attached list represents those items which are currently under a U.S. export denial policy to the Soviet bloc. The following explanation of the coding employed may assist in understanding the presentation:

1. The appearance of the number 4 as the fourth digit in the item number signifies that all or part of the item is under International Secondary List control; the termination of the item number with the letter U signifies that U.S. control is deemed to be effective; where no terminal U appears, a denial policy exists even though it is deemed not to be effective; all of these items are on SECL (Department of Commerce Security Export Control List).
2. The appearance of a number 5 as the fourth digit in the item number signifies that the item is not under any international list control but is under U.S. unilateral denial policy toward the Soviet bloc. The appearance or non-appearance of a terminal U has the same significance as in 1. above. All of these items are on SECL.
3. The appearance of a number 6 as the fourth digit in the item number signifies that the item is not an official part of the SECL but is under a denial policy toward the Soviet bloc in most instances because of its clear military importance even though the impact on the bloc is not deemed to be effective.
4. Under Criteria the letters A, B and C refer to the three basic criteria for strategic rating.
5. Under Criteria the numbers refer to action guides. The relevant guides are identified below:
2. Items on the International Secondary Control List which meet strategic criterion A, B or C and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List to prevent illegal shipments to the Sino-Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be limited to or placed under a presumption of denial to the Soviet bloc as necessary to achieve a worthwhile adverse effect on Soviet bloc war potential. 1/ (Old IMA Criterion 2(a)).

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4. Items (other than those multilaterally agreed for embargo or those covered by 2. above) which meet strategic criterion A or B and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List to prevent illegal shipments to the Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be placed under a presumption of denial to the Soviet bloc. 1/ (Old IMA Criteria 3 and 5).
5. Items (other than those appearing on the International Lists which meet strategic criterion A or B, and are judged to be of clear military importance, but which cannot be effectively controlled by the U.S., shall not be placed on SECL (except for International Secondary Control List items which shall be listed on SECL); shall not be placed on the Positive List; but shall be placed on the Polish Exceptions List to General License GRO, and shall be under a presumption of denial to the Soviet Bloc. (Old IMA Criteria 4<sup>1</sup> and 4<sup>2</sup>).
6. Items (other than those multilaterally agreed for embargo or those covered by 2. above) which meet strategic criterion C and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List or on the Polish GRO exceptions list, whichever is appropriate, to prevent illegal shipments to the Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be denied or limited to the Soviet bloc, as necessary, to achieve a worthwhile adverse effect on Soviet bloc war potential. 1/ (Old IMA Criteria 2<sup>1</sup> and 6).
7. Other items for which it is judged that limitation on exports would serve U.S. foreign policy or other U.S. policy objectives shall not be placed on SECL but may be placed on the Positive List or on the Polish GRO exceptions list, as necessary, and shall be limited or denied as appropriate to accomplish the desired policy objective. (Old IMA Criteria 7 and 8).

1/ As used in these guides the terms "effectively controlled by the U.S." and "effectiveness of U.S. unilateral control" means that such control of the item so identified would limit the war potential of the Sino Soviet bloc through the ability of the U.S. to significantly deprive (quantitatively or qualitatively) the bloc of materials, equipment, services or technology, either directly or indirectly through friendly Free World countries, because of the U.S. potential control position re their net Free World export availabilities to the Bloc.

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>METALWORKING MACHINERY</u>		
001.40U	Vertical boring and turning mills, automatic cycle types.	A,B,C, 2
002.60	Jig boring machines, n.e.s.	A,B,C 5
021.60	Jig grinders, n.e.s.	A,B,C 5
022.50U	Contour band sawing and band filing machines: (a) capable of using blades less than 5/16" wide; (b) designed to permit operator to select rate of cutting speed, and to vary such speed while in operation, and to maintain at all times the desired rate of speed with a variation of less than 2%.	A 4
027.40U	Grinding machines for broaching tools, auto cycle, auto sizing.	A 2
052.40	Planer milling machines, and combination planer and planer milling machines with capacity for work pieces 72 inches (1.80m) wide and over, or 20 feet (6.0m) long and over.	B 3,5
070.50U	Horizontal impact hammers, n.e.s.	B 4
072.41U	Presses, mechanical or hydraulic, with rated pressures of 2000 tons to 5000 tons inclusive.	B,C 2
075.50U	Spinning lathes with a spindle drive motor of 15 up to and including 25 hp.	A,B,C 4,6
090.41	Die-sinking machines	A,B,C 3,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICAL AND PETROLEUM EQUIPMENT</u>		
106.50U	Centrifugal counter-current solvent extractors, n.e.s.	B,C 4
110.50U	All mobile liquid oxygen and nitrogen generators, n.e.s.	A 4
118.60	Nitrators, batch type, with a capacity of 125 Imperial gallons (570 liters) or more.	A 5
	Centrifugal pumps (except vacuum) having all flow contact surfaces made of 10% or more chromium or nickel, either separately or combined, as follows:	
129.51U	(a) hermetically sealed, glandless (canned type);	A,B 4
129.52U	(b) designed to operate at speeds of 7000 rpm or over and produce pressures of 800 psi or more,	B,C 4,6
	Pumps (except vacuum pumps) delivering liquids separately or in combination with solids and/or gases, pipe valves and cocks, n.e.s., as follows:	
131.43U	(d) slush (mud) pumps designed to deliver at pressures of 1000 psi or over and requiring a drive rated 200 hp or over;	B,C 2,4,6
131.44U	(e) designed to deliver at pressures of 1000 psi or over and to operate at temperatures of 350°F or over;	
132.41U	Evaporation pumps	B 2
145.60	Gas cylinders (all metals and all sizes)	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICAL AND PETROLEUM EQUIPMENT (continued)</u>		

Oil well drilling and exploration equipment, as follows:

- 150.41U      (b) casinghead and Christmas tree assemblies over 2000 lbs. psi; C    2,6
- 150.42U      (c) cementing equipment; sidewall coring equipment; gun perforating equipment; photoclinometers; bottom hole pumps; blowout preventers; draw works and rotary tables 150 hp and over; B,C 2,4,6
- 150.43U      (d) well logging instruments and equipment; B,C 2,4,6
- 150.51U      (h) parts and accessories, n.e.s., specially fabricated for rotary drill (except core) rigs. (This includes, but is not limited to, items such as derrick collar control gates, draw works, directional drilling equipment, formation testers, gudgeons, specialty tools, elevators, spiders, hooks, links and connectors, fishing tools, float collars, combination guide and float shoes, sockets, tongs, etc.); B,C 5,6
- 150.52U      (i) petroleum and natural gas production equipment, n.e.s., and specially fabricated parts and accessories, n.e.s. (This includes, but is not limited to, items such as acidizing equipment, bottom hole chokes, casing and tubing head supports, demulsifiers, desalting and treating units, emulsion treating equipment, glycol-type gas dehydration units, pressurizing equipment, stripping and stabilizing equipment, indirect heaters, oil and gas separators, oil well fracturing blenders, oil well servicing tools, packers, screens, tubing patches, paraffin scrapers, perforating trucks, rod lifting equipment, sucker rods, tubing heads.). B,C 5,6

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICAL AND PETROLEUM EQUIPMENT (continued)</u>		
151.40	<p>Equipment for the extraction, production, refining or treatment of lubricants (petroleum based or synthetic), aviation fuels or components thereof, mineral oil, natural or refinery gases, and petro-chemicals, as follows:</p> <ul style="list-style-type: none"> <li>(a) processing units, the following:           <ul style="list-style-type: none"> <li>(1) solvent processing units (including phenol, duosol, furfural and nitrobenzene solvent extraction and propane de-asphalting units);</li> <li>(2) dewaxing units (including centrifugal and solvent dewaxing units such as methyl ethyl ketone and propane units);</li> <li>(3) filtration units (including percolation filtration, contact filtration, and filtral fractionation units);</li> <li>(4) fractionating, rectifying and dephlegmating columns;</li> <li>(5) hydrogenation equipment designed to operate at 360 psi or over (except equipment specially designed for the production of ammonia or methanol);</li> <li>(6) dehydrogenation;</li> <li>(7) extracting, treating, separating or stabilizing of natural or refinery gases;</li> <li>(8) isomerization;</li> <li>(9) polymerization;</li> <li>(10) aromatization;</li> <li>(11) alkylation;</li> <li>(12) desulphurization;</li> <li>(13) thermal or catalytic cracking or reforming including platforming;</li> </ul> </li> <li>(b) complete plants, including any of the above units.</li> </ul>	Under review
154.50U	Welded or seamless steel pipe over 24 inches (61 cm) outside diameter, conforming with API specifications for line pipe.	C 6
154.60	Welded or seamless carbon and alloy steel line pipe.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>ELECTRICAL AND POWER GENERATING EQUIPMENT</u>		
260.50U	Electric generators, turbo generators and turbines designed for turbo-generators, 200,000 KW and over, and specially designed parts.	A,B,C      4
260.61	Electric generators, turbo generators, turbines designed for turbo-generators and synchronous condensers of 60,000 KW up to, but not including, 200,000 KW, and specially designed parts.	B,C      5
260.62	Electric motors of 12,500 hp and over; and automatic and semi-automatic equipment for starting, stopping, reversing and speed control of these motors.	A      5
265.40	Electric power generating units of $\frac{1}{2}$ KW or over, up to and including 5000 KW.	A      3,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>GENERAL INDUSTRIAL EQUIPMENT</u>		
305.41U	Metal rolling mills, as follows: (a) continuous & high hot strip and sheet mills	B,C 2
305.42U	(b) plate rolling mills	B,C 2
323.50U	Power cranes and/or shovels, full-revolving: (a) crawler or walker-mounted, over 6 cu yds bucket capacity; (b) wagon or truck-mounted, over 6 cu yds bucket capacity or over 20 tons crane lifting capacity.	B,C 4,6
350.41U	Carbon black furnaces, combustion type only	B 2
355.60	Radio valve making machinery, except: (a) machinery, equipment and test gear specially designed for the manufacture of various types of embargoed electronic valves, transistors and crystal diodes (including sub-assemblies therefor); (b) machinery, equipment and test gear specially designed for automatic or semi-automatic assembly of electronic valves, transistors and crystal diodes (including components or sub-assemblies therefor).	7
380.41	Compressors and blowers, n.e.s., as follows: (a) compressors and blowers, n.e.s., capable of delivering air, gases, or vapors at pressures of 700 psi or over and requiring a drive rated 2000 hp or over.	B,C 3,5
385.40	Diamonds suitable for industrial use, including splints and borts.	C 3,5
385.50U	Synthetic industrial diamonds.	A,C 2
386.40	Diamond wire drawing dies.	A,C 3,5
386.60	Diamond dressers; diamond boring and turning tools; diamond core drill bits.	A,C 5
387.41U	Diamond grinding wheels.	A,C 2,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT</u>		
401.60	Floating docks.	A 5,7
402.61	Dredges incorporating dredging machines, as follows: (a) hydraulic type with a pump discharge diameter in excess of 30 inches; (b) ladder-bucket type with each bucket having a capacity of 9 cu ft or more.	B,C 7
402.62	Dredges other than those incorporating dredging machines.	7
402.63	Specialized dredge equipment and components, such as dredging machines, grabs, buckets, cutters, ladders, centrifugal pumps, and floating and shore pipelines, n.e.s.	7
405.61	Icebreakers of 2000 shaft hp up to 10,000 shaft hp and similar vessels 2000 shaft hp and over, principally designed for breaking ice having any of the following: (a) bow propeller; (b) special hull shape; (c) propulsion plant permitting quick reversing and development of maximum power at all speeds; (d) stern saddle arrangements for towing operation; (e) excessive electrical supplies and pumping facilities.	A 5,7
405.62	Icebreakers of under 2000 shaft hp and similar vessels designed for breaking ice having any of the following: (a) bow propeller; (b) special hull shape; (c) propulsion plant permitting quick reversing and development of maximum power at all speeds; (d) stern saddle arrangements for towing operations; (e) excessive electrical supplies and pumping facilities.	7
410.40	Tankers designed for speeds of 18 knots or less when in full load (design) condition.	C 3,7
410.60	Tank barges.	3,7
411.40	Whaling factories.	C 7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT (continued)</u>		
416.61	Fishing vessels and hulls therefor, n.e.s., designed for speeds of less than 17 knots when in full load (design) condition, incorporating any of the following special features: (a) deck or hull strengthening for weapons or special construction to accommodate or carry military equipment; (b) hull design suitable for direct beachings; (c) bow or stern doors; (d) any arrangements for demagnetizing or the provision of non-magnetic characteristics; (e) electrical generating capacity in abnormal excess of the needs for the vessel as a fishing vessel; (f) incorporating any Munitions List items 1/ and any of the following embargoed items: 485.10 (except the types specified in Interpretative Note No. 5), 501.10, 502.10, 510.10, and certain types of buoyant cable 2/.	A 5,7
416.62	Fishing vessels and hulls therefor, n.e.s., designed for speeds of less than 17 knots when in full load (design) condition, as follows: (a) wood or other non-magnetic hull of 60 feet (18 m) or more in length between perpendiculars, unless built before 1939, in which case 100 feet (30 m) or more in length, except the following vessels when their speed is not more than 10 knots and their electric generating capacity is under 35 KW: (1) Bonito and tuna vessels under 130 feet (40 m) in length between perpendiculars, either fitted with sponson platforms for line fishing or of the long line type; (2) seal fishing vessels under 130 feet (40 m) in length; (3) fishing cutters (Scandinavian type) under 100 feet (30 m) in length; (b) 200 feet (60 m) or more in length between perpendiculars; (c) maximum speed in deep load condition of $12\frac{1}{2}$ knots or more; (d) total round trip range at design speed above 7000 miles, in fishing condition; (e) strengthening against ice beyond the requirements of Lloyd's or other Free World Classification Societies.	7
416.63	Fishing vessels and hulls therefor, with length between perpendiculars cover 50 feet (15 m) except those covered by items 416.10 and 416.64.	7

1/ This reference is to the International Munitions List.

2/ "Buoyant electric conducting cable suitable for sweeping magnetic mines-ILL430"

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT (continued)</u>		
416.64	Fishing vessels, as follows: (a) steel bonito and tuna vessels over 50 feet (15 m) but under 130 feet (40 m) in length between perpendiculars, either fitted with sponson plat- forms for line fishing or of the long line type; (b) cutters (i.e., small coastal fishing vessels), having the following characteristics: (1) motor driven; (2) fitted with sailing equipment; (3) length between perpendiculars over 50 feet (15 m) but not over 81 ft. 3 in. (25m); (4) beam not over 21 ft. 2 in. (6.4m); (5) draught not over 8 ft. 1 in. (2.5 m); (6) engine not over 120 hp, including a normal electric generator not over 5 KW.	7
417.61	Whale catchers	7
417.62	Ships designed to accommodate 200 or more passengers.	A 5,7
417.63	Other merchant vessels, n.e.s., designed for speeds of less than 20 knots under when in full load (design)	7
417.64	Ships with any of the following characteristics: (a) bow and/or stern unloading arrangements including doors, ramps, and train or car-ferry layout; (b) special design or facilities to permit launching or landing of aircraft; (c) lifting gear over 50 tons capacity; (d) deck or hull strengthening for weapons or special construction to accommodate or carry military equipment on or under deck; (e) any arrangements for demagnetizing or the provision of non-magnetic characteristics; (f) electrical generating capacity and/or fuel capacity in abnormal excess of the commercial needs of the vessel; (g) strengthening against ice beyond the requirements of Lloyd's or other Free World Classification Societies; (h) incorporating any Munitions List item 1/, and any of the following embargoed items: 485.10 (except the types specified in Interpretative Note No. 5), 501.10, 502.10, 510.10, and certain types of buoy and cable 2/.	A,C 5,7

1/ This reference is to the International Munitions List.

2/ "Buoy and electric conducting cable suitable for sweeping magnetic mines-ILL430"

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<b>TRANSPORTATION EQUIPMENT (continued)</b>		
417.65	Other vessels, n.e.s.	7
430.61	Electric conducting cable, n.e.s., suitable for sweeping magnetic mines or for harbor defense.	A 5
430.62	Wire rope, strand and cord made of phosphor bronze or stainless steel suitable for aircraft.	A 5
441.50U	Marine steam boilers designed to operate at temperatures above 85 to 1100°F.	A,B,C 4,6
450.51U	Wheel tractors, front and rear drive, n.e.s., 135 brake hp and over.	B,C 4,6
450.52U	Off-the-road haulers, n.e.s., having an axle-load rating of 47,500 lbs or more for any one axle assembly (whether the axle assembly consists of one, two or dual axles).	B,C 4,6
450.53U	Tractors, two-wheel drive and tracklaying, n.e.s., of 135 brake hp and over.	B,C 4,6
450.54U	Industrial lift trucks of 145 brake hp and over.	B,C 4,6
450.61	Automotive vehicles or chassis, having both front and rear drives, n.e.s., and specially designed parts therefor, n.e.s.	C 7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
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ELECTRONICS AND PRECISION INSTRUMENTS

501.40	Radio communications, navigational aids and direction finding equipment, n.e.s.	A,B	3,5
503.60	Ionosphere and/or tropospheric sounding apparatus capable of use as a device for determining and/or measuring variations in electromagnetic propagation phenomena and/or through the use of such measurements, for detecting or locating physical sources of such phenomena.	A	5
514.60	Pulse modulators capable of providing electric impulses of peak power exceeding 10 KW up to and including 150 KW, <u>except</u> those of a duration of less than 0.1 microsecond; and pulse-transformer and pulse-forming equipment being specialized parts of such modulators.	A	5
517.60	Radio transmitters and components, n.e.s., <u>except</u> radio link and relay equipment, as follows: (a) transmitters or transmitter amplifiers designed to operate at output carrier frequencies from 217 up to and including 223 mc/s; (b) transmitters or transmitter amplifiers designed to provide any of the following features; (1) two or more independent modulation channels on one radio frequency carrier; (2) simultaneous output at more than one radio frequency carrier; (3) rapid selection, by means of preadjusted tuning controls, between four or more radio frequency carrier frequencies in equipment designed for operation in commercial moving vehicles; or between two or more radio frequency carrier frequencies in equipment not so designed; (4) modulation bandwidth greater than 4 KC at any carrier frequency within any of the bands 30 to 41 mc/s, 68 to 87.5 mc/s, 100 to 108 mc/s; (5) carrier output power, for static and transporable nets, greater than 100 watts, and for mobile sets greater than 25 watts, at any carrier frequency within any of the bands 30 to 41 mc/s, 68 to 87.5 mc/s, 100 to 108 mc/s; (6) special facilities for uses other than sound or vision broadcasting, mobile communications, fixed headquarters station for mobile services, or a mobile sound or vision link to a main broadcast station; (c) mobile communications equipment, or headquarters stations therefor, other than those types designed for and already in use in western countries for normal commercial civilian purposes; (d) components and sub-assemblies, including modulators and modulation amplifiers, specially designed for use in transmitters covered by subitems (a)(b) and (c).	A	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
520.60	Short range and low power links for transmission between the camera or studio and the television transmitter.	A 5
524.60	Submarine cable, n.e.s.	A 5
529.40	Radio testing equipment, n.e.s.	A 3,5
	Radio spectrum analyzers (being apparatus capable of indicating the single-frequency components of multi-frequency oscillations):	
533.60	(b) designed to operate at frequencies of 300 megacycles per second and less; and specialized parts of such analyzers.	A 5
535.60	Reactors (made of materials covered by item 631.10), n.e.s., as follows: (a) transformers, <u>except</u> power supply and power distribution types; (b) chokes and coils.	A 5
536.50U	Geophysical prospecting equipment, as follows: (a) seismometers; (b) gravimeters; (c) electronic or fluxgate magnetometers (including airborne magnetometers), <u>except</u> those covered by item 571.10; (d) complete seismic exploration recording equipment, portable or designed for truck mounting; and the following units when specifically designed and/or designated therefor: (1) amplifiers with automatic volume control; (2) variable filters; (3) synchronized timing-photographic recording equipment (including recording oscilloscopes), and parts specifically designed therefor; (4) geophones; and parts specifically designed therefor; (5) electromagnetically-damped galvanometers; (6) equipment for surface shooting, employing shaped charges.	B,C 4,6
537.60	Special tuned circuits, n.e.s., as follows: (a) electromagnetic waveguides, resonant circuits, and radiators of a kind used at frequencies exceeding 600 megacycles per second; (b) articles of equipment incorporating, or designed to be connected to or to be incorporated in, any such waveguide, circuit, or radiator.	A 5
541.60	Cathode ray tubes, as follows: (d) with screen afterglow longer than $\frac{1}{2}$ second, n.e.s.	A 5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
544.60	Crystal diodes specially designed for use at frequencies of 250 or more megacycles per second and specialized parts therefor, n.e.s.	A 5
545.40	Transistors, n.e.s.	A 3,5
549.60	Photomultiplier tubes, n.e.s., and specialized parts therefor.	A 5
555.60	Non-ruggedized vidicon tubes	A 5
558.60	Valves (tubes) electronic, n.e.s., and specialized parts, as follows: (a) those of a kind specially designed for use at frequencies between 250 and 300 megacycles per second; (b) indirectly heated valves of a kind that can be passed through a circular hole $\frac{1}{2}$ inch in diameter, but not through a hole 7.2 mm in diameter; (c) those designed to withstand accelerations of 450g up to and including 1000g.	A 5
568.40U	Electronic automatic controlling units, whether or not including associated regulating units, designed to regulate flow by continuous action as a function of one or more industrial process variables and capable of operating a regulating valve by pneumatic, hydraulic or electric means in response to an AC or DC voltage produced by a measuring unit in the process stream. <u>Note:</u> "Controlling unit" means the unit comprising those elements which apply control action to the regulating unit in relation to the deviation, which it determines by comparing (by using an electronic feedback stabilized amplifier) the desired value with the value of the controlled condition as indicated by the measuring unit.	B,C 2
582.50U	Optical curve generators capable of producing aspherical surfaces without the use of mating surfaces.	B 4
584.60	Oscilloscopes (cathode-ray) and specialized parts therefor, as follows: (c) oscilloscopes possessing any of the following characteristics: (1) a bandwidth greater than 5 megacycles (defined as the band of frequencies over which the loss does not exceed 3 decibels); (2) a time base shorter than 0.05 microseconds per centimeter; (d) oscilloscope amplifiers and pre-amplifiers having a bandwidth greater than 5 megacycles up to and including 12 megacycles.	A,B 5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
585.60	Photographic equipment, as follows: (d) high speed cameras capable of recording at rates in excess of 2000 frames per second, n.e.s.	A,B 5
591.60	Spectrographs, spectrometers, monochrometers, and associated measuring equipment, as follows: (a) grating types with, or designed for use with diffraction gratings (originals or replicas, plane or concave); and gratings therefor; (b) prism types: (1) capable of a spectrum length of 20 cms between 9000 and 2000 Angstrom units, or (2) designed for use with prisms having refracting face 35 mm or more in width; (c) infra-red types, having an effective total prism base length over 2 inches (5 cm); (d) recording or controlling densitometers or other specialized equipment for the quantitative measurement of spectra or spectrographic records. <u>Note:</u> This does not include: (1) instruments limited to the use of replica plane grating not exceeding 1 inch (2.5 cm) in ruled width, and spares therefor, and (2) instruments of the "circle" types incapable of direct measuring to less than 5 seconds of arc.	A,B 5
594.60	X-ray diffraction and electron diffraction equipment and accessories, as follows: (a) x-ray diffraction units; (b) x-ray tubes designed or intended for use in x-ray diffraction analysis; (c) powder cameras with heating element for temperatures of 5000°C (932°F) or above; (d) single crystal oscillating and rotating x-ray goniometers with x-ray film or plate holders; (e) electron diffraction units and specialized components therefor.	A 5
595.60	Transits and tachymeters (tacheometers) having a telescope magnification of 20x or higher and reading direct to 1 sexagesimal minute or better, and specially fabricated parts and accessories.	5
596.60	Photo-theodolites: other theodolites having an accuracy of 1 sexagesimal second or better by direct reading or a telescope magnification of 20x or higher and reading direct to 1 sexagesimal minute or better; and specially fabricated parts and accessories, n.e.s.	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>METALS AND MINERALS</u>		
601.41	Ball and roller bearings, and parts, n.e.s., as follows: (a) ball and roller bearings and parts, n.e.s., with inner bore diameter 10 mm and under;	A,C 3,5
601.42	(b) ball and roller bearings and parts, n.e.s. with inner bore diameter 200 mm and over;	A,C 3,5
619.60	Steel blooms, slabs, billets, and hot-rolled bars specially prepared for the production of shells and projectiles.	A 5
630.60	Scrap iron and steel.	7
631.41	Magnetic metals of all types and of whatever form, e.g., powder, strip, sheet, castings, and blocks, if possessing one or more of the following characteristics: (f) a composition capable of an energy product greater than 2 times up to and including 6 times $10^6$ gausses/oersteds, or containing more than 20% up to and including 25% cobalt;	A 3,5
631.60	(h) thickness of 0.075mm or less down to 0.01mm; (i) initial permeability of 20,000 or over up to and including 50,000; (j) remanence 85% through 97% of maximum flux; (k) core loss of 0.5 watt per pound or less down to 0.45 watt per pound at B equals 13,000 gausses and 50 cycles per second.	A 5
635.60	Alloys containing: (f) containing 6 up to 10% molybdenum (or 3 up to 5% molybdenum and 14% chromium) or 0.25 up to 1.5% columbium and/or tantalum.	A,C 5
636.41	Nickel-bearing alloy steels having a nickel content of 6% or more and containing a combined nickel-chromium content of 22% or more.	A 3,5
636.60	Iron and steel strip and sheet, including alloy, n.e.s.	7
637.60	Aluminum, as follows: (a) aluminum hard alloys used in aircraft construction, as follows: (1) crude forms (primary and secondary), including ingots, pigs, blooms, slabs, billets, blocks, grains, granules, lumps, notched bars, pellets, wire bars; (2) semifabricated forms, as follows: (i) wrought or worked materials fabricated by rolling, drawing, extruding, forging, impact extruding, pressing and graining; (ii) cast material produced by casting in sand, die, metal or plaster moulds; (3) scrap.	A 5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<b>METALS AND MINERALS (continued)</b>		
650.50	Copper, as follows: (a) copper ores, residues, concentrates, regulus, and matte; (b) copper and copper alloy scrap and old metal; (c) copper and copper-base alloys in the form of anodes, cathodes, billets, blocks, blooms, cakes, ingots, ingot bars, pellets, pigs, shot, slabs, sticks, wire bars, and other unwrought shapes; (d) copper and copper-base alloy semifinished and finished products, as follows: sheets, strips, plates, rods (including wire rods and rolled wire), pipe and tubing, wire and cable (covered and uncovered).	A,C 5
652.60	Alloy steel mill products (including stainless), semi-finished and finished, n.e.s., made from steel of the vacuum melt process.	A,C 5
653.41	Germanium, as follows: (c) germanium having a resistivity of 30 to 50 ohm per cm;	A 3,5
653.42	(d) germanium with a resistivity up to 30 ohm per cm;	A 3,5
658.50U	Molybdenum, as follows: (c) molybdenum ores, concentrates and scrap	A,C 6
658.60	(d) molybdenum compounds containing more than 35% but less than 86% molybdenum.	A 5
661.42	Nickel, as follows: (d) nickel, all forms, n.e.s.	A,C 3,5,7
672.60	Titanium carbide.	A 5
675.60	Carbon steel plates, not fabricated.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICALS AND PETROLEUM PRODUCTS</u>		
702.50U	Diester type hydraulic fluids	A,C 4
702.60	Other synthetic hydraulic fluids, n.e.s.	A 5
719.60	Dinitrotoluene.	A 5
720.60	Fluorinated hydrocarbons, as follows: (a) monobromotrifluoromethane (F-13-B-1); (b) dibromodifluoromethane (F-12-B-2).	A,C 5
725.60	2:4 dinitrophenol	A 5
727.60	Thiodiglycol and mixtures mainly thereof	7
737.60	Phosphorus, and phosphorous oxychloride and trichloride.	7
738.60	Methyl methacrylate, clear sheets or sheeting, whether single or laminated, suitable for aircraft use.	A 5
744.60	Pentaerythritol.	A 5
745.60	Potassium perchlorate.	A 5
746.60	Sodium perchlorate.	A 5
747.60	Nickel sulfate and nickel chloride.	A,C 5
750.60	Polyethylene with average molecular weight above 10,000.	A,C 5
755.50U	Diorgano siloxanes capable of being polymerized to rubber products.	A,C 4
764.60	Toluene.	7
766.50U	Polyvinylbutyral sheet.	A,C 4,6
768.60	Crude petroleum	7
769.60	Distillate fuel oils, including diesel oil.	7
770.60	Other jet fuel (aircraft turbine engine fuel) n.e.s.	A 5
772.60	Residual fuel oil.	7
773.40U	Gasoline, as follows: (a) gasoline, aviation grade, 100/130 octane and above;	A 2
773.61	(b) gasoline, aviation grade, n.e.s.	7,8
773.62	(c) gasoline, motor	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICALS AND PETROLEUM PRODUCTS (continued)</u>		
744.60	Kerosene.	A 5
780.50U	Lubricating oils and greases, petroleum based.	C 6
781.60	Synthetic lubricating oils and greases (ester type), as follows: (a) aviation engine lubricating oils; (b) lubricating greases.	7
781.61	Lubricating oils, n.e.s., except in containers of 8 ounces or less, including raw or semirefined stocks, or distillates from which lubricants may be produced.	7
786.50U	Additives for lubricating oils and greases.	C 6
788.40	Tetra-ethyl-lead fluid.	A,C 3,5
788.60	Tetra-ethyl lead and any mixture containing more than 3 cc of tetra-ethyl lead per gallon (0.66cc per litre).	A,C 5
789.60	High octane blending agents for aircraft fuels, as follows: (d) codimer; (e) cumene (isopropyl benzene); (f) diisobutylene; (g) diisopropyl (2,3 dimethylbutane); (h) hydrocodimers; (i) hydropolymers; (j) iso octanes; (k) isoheptanes; (l) isohexanes; (m) neopentane; (n) triptane (2,2,3 trimethylbutane); (o) monomethylaniline; (p) isopropylether; (q) ethyl benzene.	7
793.60	Hydraulic fluids or oils, petroleum base, n.e.s.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>RUBBER AND RUBBER PRODUCTS</u>		
	Synthetic rubber, the following:	
801.41U	(c) silicone rubbers, n.e.s.	A,B,C 2
801.42U	(d) alkyl polysulphite polymers, crude or latex;	A,C 2
801.43U	(e) copolymers of methyl vinyl pyridine and butadiene;	C 2
801.44U	(f) S-type cold rubber;	A,C 2
801.45	(g) butyl rubber;	A,C 3,5
801.46	(h) N-type rubber;	A,C 3,5
801.47	(i) polyurethane rubber	C 3,8
806.60	Pneumatic tire casings (excluding tractor and farm implement types) of 10-ply rating or over in sizes 9:00 or over.	A 5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>MISCELLANEOUS</u>		
913.60	Metal bridges, portable and knockdown, and specially fabricated parts.	A 5
914.60	Miscellaneous military and naval equipment, n.e.s., and specially fabricated parts, n.e.s. (This includes, but is not limited to pontoons; paravanes; ammunition bags; boxes and lockers; cartridge bags and belts; daggers; field baking equipment; saber chains; sabers; scabbards; military swords; camouflage nets; kitchen mess equipment; ground heaters, portable; bayonets.)	A 5
915.60	Military apparel of all types and materials (new and used) except: underwear and undergarments; socks, stockings, and anklets; handkerchiefs; neckties; trouser belts and suspenders; gloves and mittens (other than electrically heated); shoes, boots, slippers and overshoes (other than electrically heated and specially insulated); rain hats; sweaters, mufflers, and scarves; leggings; cotton trousers and cotton shirts (other than Army and Marine Corps fatigue and field types); wearing apparel manufactured in the U.S. for any uniformed branch or service of a foreign country such as the military forces of that country, military academies, police forces, customs officials, airline and airport personnel, etc., provided not identical to any U.S. military apparel; and other military outer wearing apparel that has been dyed or otherwise altered so that it can be readily distinguished from parts of the U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard uniforms.	A 5
916.60	Parts and accessories, n.e.c., specially fabricated, for military watercraft, <u>except converted</u> .	A 5
917.60	Mechanical cotton pickers, and specially designed parts.	7
930.60	Parachute cloth made of synthetic fiber.	A 5
940.61	Marine propeller shafts $2\frac{1}{2}$ inch and over in diameter.	A 5
940.62	Marine transmissions designed to operate at 1000 hp and over.	A 5
950.61	Reciprocating compressor units, over 10 hp, having a designed capacity of 60 cfm or over, and all flow-contact surfaces made of aluminum, nickel or alloy containing 60% or more nickel, and specially fabricated parts.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>MISCELLANEOUS (continued)</u>		
950.62	Reciprocating compressor units: (a) requiring a drive unit rated at 900 hp or more, or (b) requiring a drive unit rated at 300 hp or more when designed for a delivery pressure exceeding 450 psi; (c) specially fabricated parts.	7
950.63	Centrifugal refrigerating units: (a) requiring a drive unit rated at 900 hp or more, or (b) requiring a drive unit rated at 300 hp or more when designed for a delivery pressure exceeding 450 psi; (c) specially fabricated parts.	7
950.64	Centrifugal refrigerating units having a designed capacity of 60 cfm or over, and all flow-contact surfaces made of aluminum, nickel, or alloy containing 60% or more nickel, and specially fabricated parts.	7
960.60	Electronic physical properties testing and products testing and inspecting machines and equipment, incorporating circuitry designed to use one or more electronic tubes or transistors, and specially fabricated parts and accessories, n.e.s., when specially designed for use with items for which there is a presumption for denial to the Soviet Bloc.	A,B,C 1,5
970.60	Aircraft training equipment, n.e.s. and ground handling and maintenance equipment, and specially fabricated parts and accessories, n.e.s. (specially designed for training aviation personnel and for ground handling and maintenance of aircraft) as follows: Test, check-out and calibration equipment having one or more electronic components (incorporating one or more electronic tubes or transistors), and specially fabricated parts, n.e.s.	A 5

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